NEW YORK, NY 10003 (+1) 917.882.4418 PATRICK@PATRICKMAHONEY.COM

PATRICK MAHONEY

PROFILE

Software engineer and technology leader in finance with more than 20 years of experience building trading and risk management solutions in equites automated market making, commodities and credit derivative markets, and regulatory capital. Actively collaborates with business users, quantitative developers, and engineers to solve problems. Experience with multiple software languages and collaboration with different businesses, a variety of software, and both technical and non-technical consumers.

EXPERIENCE

GOLDMAN SACHS, NEW YORK, NY 2016 - PRESENT

Vice President in Finance Engineering

Capital Analytics Global Team Lead supervising eight developers. Create infrastructure in a combination of Slang (Goldman proprietary language) and Java for and lead deployment of firm's regulatory capital variance analysis to explain period-on-period movements in capital. Lead drive to make explanation and variance analysis a primary design decision by designing a framework for exposing sensitive inputs and parameters for variance analysis to all capital calculations allowing business users to optimize use of capital and grow return on equity. Drive creation of sensitivity and what-if analysis tools for capital and related financial resources allowing the firm to adapt to constantly changing regulatory environment. Tools directly affected controllers ability to forecast change in capital due to upcoming changes in regulatory environment and allowed for more efficient distributions to shareholders. Review and improve performance of database queries for data retrieval using SQL.

As part of larger Finance Engineering business unit, lead initiatives to mentor teams on code quality and testing both in Slang and Java. Champion use of shared components and use of existing tools, to help reduce operational complexity and improve supportability. Lead initiatives to remove unused applications and code to streamline code base and identify inefficiency.

Technologies: Slang (Goldman proprietary), SQL, Java

J.P.MORGAN CHASE, NEW YORK, NY 2009 - 2016

Executive Director in Commodities Technology

Led a global team of eight developers building trading and risk management systems for global commodities business. Using python's Perspective Broker server framework and internal python pricing risk libraries, developed real-time risk management system used by traders in European emissions, US natural gas, global oil, European base metals, and commodity exotics markets. Leveraged tailor-series expansion for faster risk estimate in between longer more accurate refreshes.

Focused on uplifting pricing routines to better support real-time risk and faster repricing. Identified sources of computational inefficiencies and replaced then with faster, slimmer implementations.

Executive Director in Market Risk Technology

Developed software for strategic time-series data management for Value-at-Risk (VaR) calculations in

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market risk. Developed entirely in python with focus on control, auditability, and performance.

Focused on strong code controls, reusable modules, and development lifecycle. Led and mentored larger developer team on development and testing practices and resilient software practices.

Technologies: Python, SQL, C++

GOLDMAN SACHS, NEW YORK, NY 2004-2009

Vice President in Credit Strategies

Developed real-time risk and marking systems for syndicated bank loan trading business. Created referential data system for managing public/private information which allowed public side traders to share the same data streams as those with private side access.

Vice President in Equities Strategies

Developed low latency C++ applications to support automated market making team trading in equity options. Projects included trade feeds, reconciliation and analytic tools to alert traders of data quality issues.

Technologies: Slang (Goldman proprietary), SQL, C++

CONSTELLATION POWER SOURCE, BALTIMORE, MD 1997-2004

Vice President in Front Office Technology

Developed new electricity scheduling system in Slang and C++ leveraging existing technology. Created new object-oriented model to integrate with strategic risk management system allowing for integrated risk and PNL. Enabled physical and derivatives trading to share single booking system by eliminating a legacy OS/2 trade entry system and the need for double booking of transactions. Removed redundant data storage and streamlined operational flows to reduce support for developers and allow for better controls.

Technologies: Slang (Goldman proprietary), SQL, C/C++

GOLDMAN SACHS, NEW YORK, NY 1996-1997

Analyst in Technology

Supported and enhanced operational technologies for commodities business. Helped create a more robust and stable operational flow with stronger unit testing and clearer documentation, while reducing support costs.

EDUCATION

PRINCETON UNIVERSITY – PRINCETON, NJ 1994 - 1996

Graduate courses in Mechanical and Aerospace Engineering

MASSACHUSETTS INSTITUTE OF TECHNOLOGY – CAMBRIDGE, MA 1990 - 1994

Bachelor of Science in Aeronautical and Astronautical Engineering

SKILLS

- Python, Object Oriented Programming, SQL, C/C++, Java, Javascript, Objective-C
- Commodities markets, Regulatory Capital and Credit and Equities markets